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ABSTRACT

The study reported here is the first step in what is intended to be a multi-stage project to follow 10 prepreparation students as they move through the teacher preparation program and begin to teach. This first stage explored the question of whether these students held cognitive constructs about teaching and what these constructs were like. Data were obtained through one-to-one interviews. (A copy of the interview protocol is included.) Findings indicate that the students did hold cognitive constructs about teaching, that they held different, in part mutually exclusive constructs, and that the constructs were both strongly held and deeply imbedded. The possible influence of cognitive constructs held by prepreparation students on their preparation and classroom experiences is explored, as well as the possible implications of such thinking on research into preservice, novice, and inservice teacher beliefs and practices. (IAH)

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COGNITIVE CONSTRUCTS OF PRE-SERVICE TEACHERS: HOW STUDENTS THINK ABOUT TEACHING BEFORE FORMAL PREPARATION

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COGNITIVE CONSTRUCTS OF PRE-SERVICE TEACHERS: HOW STUDENTS THINK ABOUT TEACHING BEFORE FORMAL PREPARATION

Research on "the ways in which teachers think about their work and . . . give meaning to these beliefs in the classroom (Tabachnick, et al., 1983, 4)," is making important contributions to our understanding of teaching, and providing a robust conceptual framework for examining teaching and teacher preparation. Beyond the theoretical importance of such research, and without ignoring or undervaluing the current, heated, healthy debate about the ability and willingness of such research to inform practice (Kagan, 1990; Floden and Klinzing, 1990; Lampert and Clark, 1990), the potential for informing practice, i.e., for preparing and guiding teachers more effectively and knowledgeably, continues to exist.

Conceptual Framework

Irrespective of the sources of their thinking, whether we perceive their thinking to be appropriate or inappropriate, soundly-based or superficial, conscious or unconscious, and/or whether the cognitive constructs teachers hold are or can be changed by what happens in their preparation or experience, it is clear that "what teachers choose to do is directed in no small measure by what they think . . . and how they think is informed by their perceptions and the meanings they ascribe (Clark and Peterson, 1986)." Mertz and McNeely (1990) found a clear

correspondence between the way in which student teachers thought about teaching and how they behaved in the classroom. Teachers' perceptions are influenced by their "theories-in-use, experiences, and tacit knowings (Trumbull, 1986, 143)," and by their "self-reflections; beliefs and knowledge about teaching, students, and content; and awareness (and/or use?) of problem-solving strategies endemic to classroom teaching (Kagan, 1990, 421)."

Much of the research on teacher thinking has been directed to teachers in practice, and to examining differences in the cognitive schemata of novice and experienced teachers. As Berliner (1986) and Calderhead (1983) have suggested, experienced teachers appear to have more complex, interrelated cognitive schemata for looking at and thinking about teaching than novice teachers. Experienced teachers both know and see more than novices, and they discriminate to a greater degree in what they attend to. Thus experienced teachers are more able to use what they know and see to make sense of their classroom and to control and direct their teaching behavior than are novices. Viewed from the perspective of such research, teacher thinking is perceived to be developmental in nature.

Research on pre-service teacher thinking has focused largely on students teachers (e.g., Calderhead, 1983; Tabachnick, 1983; Zeichner and Liston, 1985; Hollingsworth, 1989; Hoy and Woolfolk, 1990; Mertz and McNeely, 1990). Such research, while confirming

that experienced teachers' cognitions were more informed by knowledge than novice or student teachers (Calderhead, 1983), and providing invaluable information about the cognitions of student teachers, also provided conflicting results about whether the cognitions of pre-service teachers changed as a result of student teaching and/or related experiences.

Tabachnick (1983), who followed four student teachers for two years through their first year of teaching, found that student teaching did not lead to changes in the perspectives they brought to the experience. Hollingsworth (1989), who studied 14 pre-service teachers before and during their involvement in a nine month graduate teacher education program, found that some of the participants changed (defined as learned program concepts or what was asked of them); but some did not. Veenman (1984), found that prospective teachers changed their perspectives and behavior as they encountered the realities of teaching. This has been most recently reaffirmed by Hoy and Woolfolk (1990), who studied 191 students at various stages of their preparation. They concluded that, "The assumption that organizational socialization results in the adoption of a more custodial pupil-control orientation was again supported by the findings of the study." They also found that student teachers' general sense of efficacy (that schooling can overcome other limitations students bring), but not personal sense of efficacy (that they as teachers can make a difference) changed from more to less optimistic. Mertz

and McNeely (1990), who looked at the thinking and behavior of 11 pre-service teachers before, during, and immediately after student teaching, found, as with Veenman (1984) and Hoy and Woolfolk (1990), that the prospective teachers changed their thinking and behavior during student teaching. They became more concerned with classroom management and control, and more controlling. They also became less confident in the ability of well-planned/delivered lessons to interest and motivate students, and, in contrast to Hoy and Woolfolk (1990), less confident in their sense of personal efficacy. For Mertz and McNeely (1990), one aspect was particularly compelling. The teacher preparation the students had received prior to student teaching had been carefully constructed in line with "best thinking practices," delivered by one person, the person who had crafted the program, and had had a clear effect on the students. Indeed, in contrast with general research which has suggested that teacher preparation has little effect on the behavior of students, the thinking and behavior of the students had been molded by the program. They brought this thinking and behavior into the student teaching experience, and it was this thinking and behavior that changed during the student teaching experience.

What accounts for the different results that researchers get as they look at whether prospective teachers change as they go through pre-service preparation? Are there pieces of the puzzle related to teacher thinking that have not been examined, that

might cause us to think about these results in some different ways?

Lortie (1975) has argued that through their long "apprenticeship of observation," pre-service teachers have unconscious, internalized, "subjective understandings" about teaching that they bring to teacher preparation, and that these prevent and/or hinder their learning of new understandings. This view has been reiterated by a number of researchers. Book, Byers and Freeman (1983) argued that teachers-to-be came to preparation programs with confidence (moderate to total) in their ability to teach. Hollingsworth (1989) concluded that "preprogram beliefs served as filters for processing program content and making sense of classroom contexts . . . (168)." Clark (1988) contended that, "students begin teacher education programs with their own ideas and beliefs about what it takes to be a success (7)." This notion, that teachers-to-be possess cognitive constructs about teaching (and perhaps also about school, students, and learning), that predate their entrance into teacher preparation programs or even their conscious commitment to become teachers, has long been noted, but has received little direct attention.

Clark (1988) posed the central questions: "What are the preconceptions about teaching and learning held by our students? How should we take account of what our students know and believe as we help them to prepare to be teachers (7)?" These questions nagged at us as we did our study of student teachers (Mertz and

McNeely, 1990) and considered the research and literature about the effects of teacher preparation programs and student teaching on the attitudes and behaviors of prospective teachers. The relationship between teacher thought and behavior, and in our research, the correspondence between student teacher thought and behavior, seemed clear. Teachers do hold constructs about teaching, and they find expression in their classroom behavior. Changes in behavior, whatever the causative factors, reflect changes in cognitions, conscious or unconscious. What was not clear, however, was the nature or effects of pre-existing constructs, i.e., cognitions students brought to their preparation programs? Indeed, while there was a good deal of empirical support for the idea that prospective teachers held cognitions about teaching before entering formal programs of study, there was little documented verification for the assertion.

We became intrigued with questions relating to the cognitive constructs pre-service teachers hold about teaching, i.e., how they think about teaching, before formal preparation. Do pre-service teachers have constructs about teaching? What is the nature of the constructs they hold? What influence/effect do these constructs have on what happens to students (their thinking, behavior, attitudes) as they go through the teacher preparation program and move out into teaching.

The Study

The purposes of the study were and are to examine the questions of how students think about teaching prior to beginning formal work in the teacher preparation program, to identify the constructs they hold about teaching, and to see what happens to these constructs and their teaching behaviors as they move through the preparation program, into student teaching, and into the first year of teaching. The study is thus seen as long-range, multi-phased, and not without problems.

The first phase of the study, which is reported here, focused on how pre-preparation teachers thought about teaching. The study sought to determine whether the assumption that pre-preparation teachers possess cognitive constructs about teaching which they bring to teacher preparation programs was accurate, what the nature of the constructs they held were (assuming they are found to hold such constructs), and to identify factors which may relate to the nature and development of such constructs. The study was thus exploratory and descriptive in nature, and while the questions identified guided both the collection and analysis of data, the study sought to identify questions that need to be answered as much as to answer the questions asked.

Procedures

Subjects

Ten prospective teachers at a large, land-grant, multi-purpose university were randomly drawn from a list of 37 students who had identified an interest in teaching and volunteered to participate in an investigation about teaching. The question of the number of students chosen was influenced by the design of the study, which was intended to identify students who would be followed for a number of years; thus a practical consideration was just how many could reasonably be followed.

The students selected, and the pool from which they were selected, may not be representative of teacher education students, and no such claim is made here. The problem of identifying pre-preparation students is obvious. How can we know who they are before they declare themselves? The university from which the subjects were drawn offers a pre-preparation, ten-week field experience for freshmen or sophomores. It provides an opportunity to work with (not defined) a classroom teacher in a school. There is an application/screening process for admission to the teacher education program which does not ordinarily occur until the junior year, after certain liberal arts requirements have been met. This pre-application field experience, for which there are no requirements, is intended to maintain pre-existing interest in teaching during the period when interested students can neither apply to nor participate in the teacher preparation

program. The students who voluntarily participate in this experience clearly meet the needs of the study for students who are interested in teaching, but are pre-preparation.

Of the ten subjects, three were male (#2, 9, 10; one interested in elementary school teaching and two in secondary school teaching), and seven were female, (three interested in elementary school teaching and four in secondary school teaching). Of the six subjects interested in secondary school teaching, two females planned to teach foreign language, one male to teach mathematics, one male to teach language arts/social studies, one female to teach English, and one female to teach social studies. All of the subjects were white; one was 19, eight were in their twenties, and one was in her thirties. Three subjects were "returning" students, i.e., had either not gone to college before (#6, 8), or were changing careers (#9). The remaining subjects were traditional undergraduate students, having come to the university directly from high school.

In the manuscript, subjects are referred to by identifying number. A list of subjects, by identifying number, with their ages and teaching levels/subjects, appears as Attachment 1.

Methodology

A number of methods have been used to get at teacher thinking (Kagan, 1990). We determined that the most appropriate and potentially valuable way was to conduct in-depth, face-to-

face interviews with the prospective teachers. In contrast to what has been argued by Kagan (1990), we believed that their cognitions could be assessed directly, through asking them questions about how they thought about teaching, and providing a situation and context in which they would feel comfortable in sharing these thoughts. We sought to generate sufficient data to ensure that we got at the phenomenon under study and the kind of data that would allow for the search for patterns. Interviews allowed us to collect rich data, what the subjects said and the way they said them, contextually. The subjects could frame their answers as they chose, adding whatever they liked, and the researchers had the luxury of being able to ask them to elaborate, either to ensure clarity or to learn more. It should be noted that the researchers are not a part of the teacher preparation program and will play no part in the future preparation of these students.

No assumption was made that the subjects held cognitions about teaching, nor that if they did, they could or would articulate them. Further, it was not assumed that what they would say about teaching was necessarily untainted by their perceptions of what they should say. We were cognizant of these issues as we constructed the interview protocol, and attempted to avoid asking or phrasing questions in ways that might rouse such responses. Nevertheless, we were persuaded by the perception of Harre and Secord (1972), that "the things people say about

themselves and other people should be taken seriously as reports of data relevant to phenomena that really exist and which are relevant to the explanation of behavior (7)."

The interview protocol contained eight questions and accompanying probes in case the respondents were unsure or unresponsive. The questions revolved about how they had decided to become teachers; whether other members of the family were teachers; how they had perceived their school experience as students--and how they perceived the school had perceived them; describing what it would be like when they were teachers; comparing their experience in school with what they perceived it would be like when they were teachers; sharing their perception of how they would do if they went out to teach right now, before they had taken any work in teacher education; and what they thought they would get from the teacher education program. The interview protocol of questions and probes appears as Attachment 2.

Each interview was conducted in a single session lasting one hour or more. The interview was conducted at a time convenient to the student. Seven of the interviews were clustered in a period of three weeks and the remaining three were conducted in a period of two weeks, nearly two months later. After general amenities, each interview began with the directive, "Tell me a little about yourself." This was followed by asking the questions in the protocol. Each question was asked of each

subject and their responses were taken down in longhand. Early concerns about tape-recording led us to abandon that in favor of the far more cumbersome note taking procedure. Questions, elaborations, and asides were also taken down. The interviews were transcribed and reasonably complete transcripts of the interviews were secured for each subject.

Analysis

The data that emerged provided a rich narrative in the words of the respondents. The data were examined by each of the researchers. They analyzed the data independently and then came together to analyze it jointly. The data were analyzed inductively, in the search for patterns that would allow for answers to the questions guiding the study: How do students who have not yet entered the preparation program think about teaching? What is the nature of the constructs they hold about teaching? To what extent are the ways in which the respondents think about teaching similar/different? What factors may contribute to the ways in which they think about teaching?

For each respondent, the answers to each question were examined individually and compared to those provided by other respondents. The responses were looked at in terms of what the respondent said, and in terms of the words used and recurring in the way the respondent talked about what she/he thought. Each

interview was also examined as a whole to see if there were consistent threads that expressed patterns of thinking.

Findings

The interviews provided extremely rich data about the ways students thought about teaching. In some ways, the students thought about it in somewhat different ways, attended to different aspects, and spoke about teaching in a variety of ways, thus retaining the individuality of their "voices." Nevertheless, themes emerged within interviews and among interviews defined commonalities of thought among subjects. These themes allowed us to answer the questions posed by the study:

1. Do pre-preparation students hold cognitive constructs about teaching?

2. What is the nature of the cognitive constructs they hold?

3. What factors may relate to the constructs they hold?

Do pre-preparation students hold cognitive constructs about teaching? If a cognitive construct is a way of thinking about teaching, a mental picture of how it is and how it works, the answer to the question, at least for the subjects studied, was a resounding yes. The subjects had no difficulty identifying what teaching was about for them, what their classroom would be like, and how they would be. They had a picture in their minds about how students would be and would act, and how they would be as

teachers. And their cognitions were clear, focused, easy for them to identify, and offered with confidence that what they said it would be was how it would be.

None of the constructs were highly developed. They might be most aptly characterized as "pieces" of what teaching is, rather than the whole of it; and the respondents did not necessarily see relationships amongst disparate pieces. They tended to focus their thinking on one dimension of teaching, e.g., relationships with students, or organization, and to see "good" teaching as the realization of that piece. Some saw more pieces than others, and while a few had sophisticated "pieces" about teaching, many had simple, naive ones. Notwithstanding their nature, the constructs they held were strongly held, i.e., they pervaded their answers, and key related words recurred in their descriptions and explanations.

While we can not say with any certainty where their constructs came from, certain notions emerged from the data. In most cases, the constructs they held appeared to derive from their experiences as students. Almost all of the subjects had one or two teachers after whom they planned to model themselves, and their constructs were similar in focus and content to that which they ascribed to that teacher(s). Not surprisingly, a majority appeared to have built a portion of their construct from things they had seen and/or experienced that they perceived to be

wrong for teachers to do. These became part of the way in which they framed their construct, i.e., to be the opposite.

What is the nature of the cognitive constructs the pre-preparation students hold? While the ways in which each subject described his or her thinking about teaching were somewhat different, when their thoughts about teaching were analyzed, five different cognitive constructs emerged. The constructs were clearly identifiable, different in focus and content, and discriminated amongst the subjects, i.e., their thinking could be categorized in only one of the patterns. The majority of subjects (seven) held one of two constructs; the remaining three each held different constructs, different from the rest and different from one another.

These single example constructs had some elements in common, and we tried hard to find a/the thread that would bind one or more of them together. But the ways of thinking subsumed by the constructs were resistent to such melding. Unlike the two constructs around which seven of the respondents clustered, the three could not be combined without doing violence to the thinking about teaching they encompassed. There is no reason to assume that the three constructs are not separate and distinct; or for that matter, that there aren't more constructs out there and/or more pre-preparation students with the same constructs. It is the notion that we have only one example to identify and support each of these constructs that remains a concern.

Construct 1

Four subjects (#2, 5, 7, 10) held a construct about teaching that revolved about organization and subject matter. They valued order and organization in the classroom and they saw these as defining good teaching and good teachers. Knowledge was equally valued, and they saw transmission of the subject matter to students as the primary task of the teacher. For them, organization and subject matter transmission was what teaching was about.

In the ways they spoke about teaching and how it would be, they revealed this construct. Words like "knowledgeable," "very organized," "well-prepared," "orderly," "rules," and "routines," permeated their descriptions, and they rejected "disorganization" and "unstructured classes." Said one, "If students are up out of their seats, they can't learn." In describing her classroom, one respondent shared, "It will be very organized. You can tell a lot by a teacher's desk. Mine will be neat, organized, with separate stacks by class. I'll know where everything is."

The respondents spoke about the importance of routines, "The role of the teacher is to teach routines," and of rules, "I'll have rules, but not hard and fast rules because if you do and don't follow through you'll have problems," and one, explaining how her views had changed since she was a student, "Some rules I didn't like--there was no reason for them. But now I see why they have them."

The subjects saw their obligation as teachers in terms of teaching the required subject matter. "My job is to give information," said one, "to teach them the subject matter, the basics," said another. And yet another argued, "instruct in their subject; shape the student for society and beyond the classroom." One respondent argued eloquently, "The role of the teacher is to prepare students in the subject, provide the foundation for the next step; even if they don't go on. All students get the same thing, irrespective of what is going to happen to them later. With few exceptions, if students wanted to, all could learn. The teacher (has to) do whatever it takes to make the student want to learn (the subject). You're not there to babysit; you're there to teach."

While they expressed great concern for communicating to students that they were interested in them, and wanted to have a good relationship with students, they saw teaching in terms of teacher control and direction. They were concerned with being "an authority figure," and with "having students do what they were told." "Teach the student to take directions and accept the consequences." And they expected students to be attentive and ready to learn. "A bunch of kids, sitting there looking up at me with big eyes, excited, ready to learn, eager to learn." "They'll be in their seats, taking notes, paying attention, caring about my opinions." "They'll be looking at me. I'll be standing in front with a smile on my face. I'll be speaking

(names a language) almost the whole time. If there are confused faces, I'll go back and repeat slowly." "I'll be up front, standing at the door. Everyone will come in and sit down. They'll be ready to work without being told." "I won't lecture all period. I'll review the assignment. Everybody will put stuff on the board. I'll be around the room checking if students have the work."

Construct 2

Three subjects (#6, 8, 9) held a construct about teaching that focused on classroom climate and on nurturing personal student growth. The three were concerned with students as individuals, and perceived their primary responsibility to be the support and development of each student as a human being, i.e., in the affective domain. The saw their success as teachers in terms of student growth and satisfaction, and saw the teacher's primary role as "setting goals that are responsive to individual children's needs."

The respondents spoke about what they would do to create a positive climate and nurture individual student growth. One subject reflected, "I want a relationship--to know the names, to know where they're struggling, to build their confidence, as with my own children." Another said, "Teaching is about making children realize their potential--their strengths--and that they shouldn't set limits on it." And the third stated, "A teacher's

role is to instill self-esteem. High self-esteem leads to greater accomplishment."

They rejected teachers who "didn't care if students learned," "put students down for being slow," "yelled," or were "bored and boring." One subject argued, "I know kids of this age. Some like school; some don't. The big challenge is to get them all interested. Not to force them, but to make them want to learn." Another said, "You absorb the energy of those around you. If the teacher is energetic, kids will be eager." "When teachers are good, they handle students with respect," said the third.

The respondents spoke about the importance of being a "positive role model" for the students, of being "accessible," and of "having an effect" on students. In contrast to the respondents who had focused on organization and subject matter, these respondents barely even mentioned them. One remarked, "You need order, but it makes kids resent school." Another said that the teacher "shouldn't just get up and tell."

Construct 3

One subject (#4) held a construct that focused on student thinking. She viewed her responsibility as developing the students' ability to think, to examine ideas, and to look at things "differently." She argued that, "A teacher should teach you to look at things in a new way; teach you the code and how to

decipher it." "It's about thinking." In describing her favorite teacher, she said, "She taught us 'don't accept anything just on authority.' She got everyone to think. This is what it's supposed to be like."

She declared a "love of the subject," but rejected the idea of teaching the basics, although she knew it had to be done. "It's monotonous. At that level it wouldn't be stimulating to me. I wouldn't get to the thoughts."

Construct 4

One subject (#3) held a construct that focused on student involvement and participation, doing, irrespective of the subject matter. She viewed her primary role as that of energizer directed toward promoting student excitement, involvement in the activities, and individual action and expression. "It would not be the same (as it usually is in school). I want them to see it as I see it . . . real life, real people, enthusiasm, involvement, getting interested." She rejected the idea of students doing the same thing over and over and saw her role as challenging students to do things differently. "I see myself as enthusiastic. I will be fielding questions and forcing them to participate and answer." "I see people thinking and participating. A lot of discussion and activities, not just learning for a test. In school I can make it interesting, involving, and active. Then they will want to learn." "School

is not about sitting in your seat and being quiet. You can have control without suppression. There must be freedom."

Construct 5

One subject (#1) held a construct that focused on "doing good," of serving. She believed that the role of the teacher was to make a difference in the lives of her students, to change what happens to them. Unlike those who focused on the personal growth of each student, she saw students in a collective way, and her role as serving socially desirable ends. She wanted to teach in an inner-city school because "they often get teachers who are not dedicated." She "liked the people who were teachers," and felt "an obligation to give back to society." She saw teaching as "an excellent way" to do this.

She saw the role of teacher as providing what students needed. "You need to find their level, get down on it, and then just do it." "Inner-city kids will probably be more remedial so you have to fill the gaps--the skills they weren't taught well--writing, using proper grammar, so they can get jobs." Where students were more affluent, it was "teaching them the (subject) of the period so they'll know about it." She argued that it "must be interesting" and you "must know what you're talking about," but it was most important to "use good examples that will mean something to them."

Above all, she wanted to be memorable. "I'd like future students to say of me, 'She was one of my favorite teachers.'"

What factors may be related to the constructs pre-preparation students hold about teaching?

Choosing to Become a Teacher

In describing how they came to choose teaching as a career, more than half described essentially the same pattern. Five had tried other courses of study or done other things, found they didn't like them, thought about what they did like, and found that teaching was something you could do with it. Teaching for them was not necessarily a first or an intended choice, but it represented a reasonable accommodation between their interests and what they could do with them (#1, 3, 5, 7, 9). One additional respondent (#4) sought such an accommodation between her interests and a desire to identify a work structure that would allow her to have a family. She was like the other five respondents, except she had not tried other programs or careers first.

For three respondents, teaching was an early, first choice. Two (#6, 10) indicated that they had always wanted to be teachers, and had not seriously focused on any other career. Another (#2) had not known what he wanted to do with his life until he was "inspired" by his 8th grade teacher. For the

remaining respondent (#8), the decision to become a teacher came after serving as a room mother in her daughter's classroom and then as an aide.

Six of the subjects had relatives who were teachers (#1, 3, 4, 5, 6, 7). Five of these were amongst the majority group that had not chosen teaching as their first choice, but had made the decision on the basis of accommodation. Only one of them (#6) knew she wanted to be a teacher from early on, and it was a first choice. Her relative was the most distant of all of the six who had teachers as relatives (a great aunt). Most of them had a mother, father, or grandmother as teachers, and one had one of each, and then some. Four of the subjects had no relatives who had been teachers (#2, 8, 9, 10).

Reflections on their Experiences as Students

In responding to the question about how they saw their own school experience, there were clear patterns of responses. In terms of how they felt about school when they were there: four subjects said they had liked school (#2, 7, 9, 10); three that they had disliked school (#1, 3, 4); one saw it as "important" (#5); and two saw it as "unimportant" (#6, 8).

Despite how they felt about school, all but one of the subjects reported they had gotten good or very good grades, and four specifically mentioned being in honors classes or advanced placement classes. Only one student indicated that she had not

gotten good grades (#6). She was the subject who felt that school was "unimportant." None of the respondents felt their school would describe them negatively, and while their responses tended to be couched in modest terms, they each reported they believed they would be described in positive terms by their teachers and school.

As with grades, perceptions of teachers were not necessarily related to feelings about school. Three respondents generally perceived their teachers to be good to great (#1, 2, 10). Four generally perceived their teachers to be bad (#3, 6, 8, 9). Three described a mixture of both kinds (#4, 5, 7).

Teaching Models

Nine of the ten subjects had clear, well-defined models (teachers) they planned to emulate. They each named a teacher they had had in school as that model. In addition, four of them cited another teacher, but one which they had not necessarily had, as a model. In three of the four instances, it was a relative.

It is interesting to note that six of the nine subjects were planning to teach at the level and/or in the subject matter taught by the teacher, or one of the teachers, after whom they planned to model themselves (#2, 3, 6, 7, 8, 10).

Pre-Preparation Perceptions

When the subjects were asked whether they thought they would do a good job if they suddenly became teachers now, without going through the teacher preparation program, seven of the ten said yes (#1, 3, 4, 5, 8, 9, 10), one said no (#6), and two were unsure (#2, 7). The reasons they gave for their responses were most revealing. Working backwards, of the two who were unsure, #7 suggested that she thought she could handle the class, but "I don't think I could teach them enough," and #2 said he was unsure because he is so close in age to the students, "I might have problems with students. They might not listen." The subject who said no reflected, "I'm not well-prepared, I couldn't remember all the stuff you need. And discipline would be a problem, too."

Those who responded yes varied in the confidence they felt, but nevertheless were in agreement that they could do a good job. Four of them were highly confident about it. "You're innately good or not good as a teacher; I'm good" (#1). "I can do a good job. I've got lots of good ideas" (#3). "I'd do a great job because I'm interested in doing it" (#8). "Yes. And I'd do it in a heartbeat" (#10). Three were somewhat less confident, but nonetheless saw themselves doing a good job. "Yes, but, not as well as after training" (#4). "I pay enough attention to details that I could pull it off" (#5). "I wouldn't start out that great. I wouldn't be confident . . . After time, I'd learn from experience" (#9).

In responding to the question of what they believed they would get from the teacher education program, the respondents, as a group, voiced serious reservations and unsureness about what they would get from the program, and tended to frame their answers in terms of what they hoped to get, rather than what they expected to get. Respondents often cited two or three things they hoped to get, however, they focused on one of these.

Two cited credentialling (#2, 10). "It's just something you have to do. You learn something, but not much," (#2). Two cited getting information needed to deal with the sociological and psychological problems students bring to school, e.g., suicide, drugs (#3, 5). One cited discipline strategies. "I want to learn about classroom discipline. My one fear is how to deal with a student who challenges you. But I've heard that they don't teach you that here" (#1). Four identified teaching methods and materials (#4, 6, 7, 8). "I hope to learn how to teach, what to teach, and what is right and wrong in teaching" (#7). ". . . methods of teaching, test construction, and also classroom control" (#4). "How to present material, how to teach, at what level, and more of today's ideas" (#6). "How to teach, how to convey knowledge, and ideas about how to make it fun" (#8). And one saw himself getting the benefit of the professors' experiences as former teachers (#10).

Discussion

The study reported here is but the first step in what is intended to be a multi-stage project to follow the ten pre-preparation students as they move through the teacher preparation program and begin to teach. This first stage was intended to explore the question of whether these students held cognitive constructs about teaching and what they were like. We found that they did indeed hold such constructs, that they held different, in part mutually exclusive constructs, and that the constructs were both strongly held and deeply imbedded. While the results of the study can not be generalized to all pre-preparation students, if they have any applicability, they raise some interesting speculative questions and ideas.

If students do indeed possess cognitive constructs about teaching, they will bring these to the process of learning about teaching from teacher education programs. The construct will constitute a perceptual screen through which they see, hear and understand what it is teacher educators seek to teach them. And the results of that teaching will be powerfully influenced by what it is the student sees, hear, and understands. To what extent have we taken this into account in teacher education?

In both design and execution, teacher education programs act as if students do not possess pre-existing cognitions about teaching or that if they do, they all possess the same one, allowing teacher preparation to be laid onto a level playing

field. If students not only possess pre-existing cognitions, but they possess different ones, the playing field is not only not level, but the program is built on an untenable foundation.

We can only speculate about the possible effects of attempts to impose new or different constructs (in teacher education programs) on pre-existing ones, without even considering that prior ones may exist. To be most effective, teacher education programs must not only consider the very real possibility of multiple constructs, but design and deliver preparation programs on the basis of multiple, pre-existing constructs. To "touch" students, to enhance and extend the ways in which they think about teaching, no less to change these ways, it is imperative to begin where they are in their thinking. Even then, we may face strong resistance. Embedded constructs, perhaps developed, and certainly reenforced by experience, may well be highly resistent to change. Nevertheless, any hope of changing them lies first and foremost in knowing what they are and in addressing them directly. Barnes (1986), has argued this point most persuasively. "Too often, in considering what beginning teachers need to know, we have failed to consider what novices think they already know. . . Rarely is this tacit view ever confronted in teacher education programs. As a result, decisions are made about what beginning teachers need to know without taking into account their prior conceptions of teaching, learning, learners, subject matter, and other commonplaces of teaching (13-14)."

The notion of multiple, pre-existing constructs provides another way of looking at the kinds of results researchers have gotten in looking at the effects of preparation programs. What if the cognitive construct the student brings is a key variable in the results, one to which we have paid little attention. Pre-existing constructs may persist despite what students are taught in such programs, and new constructs, if learned, may be overlaid on pre-existing constructs, maintained as separate entities, mushed together, or something else. But pre-existing constructs may well persist to re-emerge at a later time, say in practice, when the context is similar, or is perceived to be similar, to that in which the original construct was developed. What are the implications for teacher preparation programs of such a possibility?

In a different vein, where do the cognitive constructs pre-preparation students hold come from? At the simplest level, one can reasonably surmise that they come from the students' background and experiences as students, from their years as "teacher watchers" (Barnes, 1986, 13). However, if it is true that students hold different constructs, what accounts for the differences? Why is it, how is it, students can derive dissimilar constructs from similar contexts? What accounts for differences in what students pull from, attend to, and value from the experience?

In yet a different direction, by and large, the students we studied didn't expect to get much from the teacher education program. To what extent is this a widely-held perception among pre-preparation students? And, of more immediate importance, to what degree will this perception, expectancy if you will, frame and limit what they do get and can get, from the program? Similarly, a majority of the subjects we studied were confident that they could do a good job without any educational preparation to be teachers. How will this perception influence how they approach and the value they derive from what is taught to them in the program? And, what are the consequences of what may well be a persistent and more widely held attitude than we have hitherto believed, that it doesn't take any or much special preparation to be a teacher? Increasingly, alternative certification programs may appeal not just to legislators, but perhaps to the pool of applicants from which teacher education programs draw their students.

Attachment 1.

SUBJECTS

Identifying No.	Gender	Age	Level/Subject
1	F	21	Secondary/English
2	M	21	Secondary/English; Social Studies
3	F	21	Secondary/Social Studies
4	F	19	Secondary/Foreign Language
5	F	20	Secondary/Foreign Language
6	F	25	Elementary
7	F	20	Elementary
8	F	38	Elementary
9	M	28	Elementary
10	M	20	Secondary/Mathematics

Attachment 2.

INTERVIEW PROTOCOL

Name

Sex Age

School Level for Which Preparing

Tell Me a Little about Yourself . . .

1. How did you come to choose teaching as a career?
2. Do you have any relatives in teaching or education?
3. As you think back on your years in school, particularly high school, describe how it was for you . . .
   - Did you like it?
   - Were you a good student?
   - What did you think of the school? Teachers?
   - If we were to ask the school personnel how you were perceived, what would they say?

4a. Projecting yourself into your first classroom, tell me how it is, what you see . . .
   - How will the students be?
   - How will the school be?
   - How will you be?

Envision the "perfect" class/day/situation . . .

Attachment 2 (Continued).

4b. Was this the way it was when you were a student? If no, why will it be different?

5. What do you believe to be the role of the teacher?
   Why are you there?
   What is it you are to do?

6. As you think about yourself as a teacher, is there a person or persons who come to mind who would be models of how it should be and how it will be when you are a teacher? Do you have a model you will try to emulate?

7. If you were suddenly offered an opportunity to become a teacher (without any more program preparation), do you think you would do a good job? Probe why.

8. What is it you expect to get from the teacher preparation program?

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